TRAFFIC SIGNAL AT THE INTERSECTION OF MD 32 (SYKESVILLE RD) AT BARTHOLOW RD./ LONDONTOWN BLVD. IN CARROLL COUNTY. MD 32 IS CONSIDERED TO RUN IN A NORTH/SOUTH DIRECTION. BARTHOLOW ROAD IS BEING WIDENED, Pedestrian movements are being upgraded to aps, INTERSECTION OPERATION THE EXISTING CABINET AND CONTROLLER SHALL BE USED AT THIS LOCATION, THE INTERSECTION WILL CONTINUE TO OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES, THERE IS AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR BOTH THE NORTH AND SOUTHBOUND MOVEMENTS OF MD 32 WITH RIGHT TURN OVERLAPS FOR BOTH THE EAST AND WESTBOUND MOVEMENTS OF BARTHOLOW RD/ LONDONTOWN BLVD. THE MD 32 THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY WITH CONCURRENT/ ACTUATED PEDESTRIAN MOVEMENTS ACROSS THE EAST AND WEST LEGS OF THE INTERSECTION. THE BARTHOLOW RD/ LONDONTOWN MOVEMENTS WILL FOR BARTHOLOW ROAD OPERATE IN A SIDE STREET SPLIT PHASE MODE WITH AN ACTUATED PEDESTRIAN MOVEMENT ACROSS THE SOUTH LEG OF THE INTERSECTION. TRAFFIC SIGNAL IS INTERCONNECTED IN A SYSTEM. THE DURATION OF THE WALK PHASE, SPECIAL NOTES 1. THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS: PROJECT CONTACTS: MR. JOHN CONCANNON, ASSISTANT DISTRICT ENGINEER - TRAFFIC PHONE: (301) 624-8140 MR. JOHN HUCHROWSKI, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION PHONE: (301) 624-8200 MS. SUE PALMER, ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (301) 624-8105 MS. ANDREA ABEND, UTILITY ENGINEER PHONE: (301) 624-8115. MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION MR. EDWARD RODENHIZER, SUPERVISOR, SIGNAL OPERATIONS PHONE: (410) 787-7652 EQUIPMENT LIST A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION. LESS THAN OR EQUAL TO 2%. NONE. B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR. QUANTITY UNITS DESCRIPTION LUMP SUM MAINTENANCE OF TRAFFIC LUMP SUM MOBILIZATION LS 10 FT, STEEL PEDESTAL POLE WITH BREAKAWAY BASE 10 FT, STEEL PEDESTAL POLE WITH SHALLOW BREAKAWAY BASE 27 FT. STEEL MAST ARM POLE WITH 50 FT. MAST ARM VIDEO DETECTOR RETRO-FIT KIT W/ POWER SUPPLY VIDEO DETECTOR INTERFACE PANEL (1 PER EVERY 4 CAMERAS) VIDEO DETECTOR CAMERA (TERRA) EΑ VIDEO DETECTOR CAMERA CABLE AUDIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH 9 IN. X 15 IN. R10-3(1) PUSHBUTTON SIGN APS 2-WIRE CENTRAL CONTROL UNIT EΑ 8 IN./ 12 IN. 4-SECTION LED SIGNAL HEAD (8 IN. R,Y,G/ 12 IN. GA) - MAST 12 IN. 4-SECTION LED SIGNAL HEAD - MAST 12 IN. 5-SECTION LED SIGNAL HEAD (R,Y,G,/ YA,GA) 16 IN.1-SECTION, 1-WAY LED (COUNTDOWN) PEDESTRIAN SIGNAL HEAD - POST TOP 30 IN. X 36 IN. R3-5 REGULATORY SIGN - MAST ARM 78 IN, X 36 IN, M95-1(4) GUIDE SIGN - MAST ARM 24 IN, X 30 IN, R4-7 REGULATORY SIGN - GROUND 15 4 IN. X 4 IN. WOOD SIGN SUPPORTS TEST PIT EXCAVATION HANDHOLE 900 2-CONDUCTOR CABLE (NO. 14 AWG) 955 5-CONDUCTOR CABLE (NO. 14 AWG) 1600 7-CONDUCTOR CABLE (NO. 14 AWG) 400 BARE COPPER GROUND WIRE (NO. 6 AWG) 95 3 IN. PVC CONDUIT [SCHEDULE 80] - TRENCHED 4 IN. PVC CONDUIT [SCHEDULE 80] - TRENCHED 10 175 4 IN. PVC CONDUIT [SCHEDULE 80] - SLOTTED IN ROADWAY 3.7 CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT GROUND ROD - 3/4 IN. X 10 FT. LENGTH CUT, CLEAN, AND CAP MAST ARM/ POLE 390 12 [N. WHITE THERMOPLASTIC PAVEMENT MARKING - CROSSWALK 24 IN. WHITE THERMOPLASTIC PAVEMENT MARKING - STOP LINE RELOCATE EXISTING SIGNAL HEAD - MAST REMOVE EXISTING SIGN - MAST RELOCATE EXISTING UNDERGROUND INTERCONNECT CABLE 125 REMOVE AND DISPOSE OF EXISTING CONCRETE FOUNDATION 12 INCHES BELOW GRADE LUMP SUM ADJUST HANDBOX TO GRADE LUMP SUM RELOCATE EXISTING MICRO-LOOP CABLES, [2 AT APPROX, 125 LF] LUMP SUM REMOVE EXISTING SIGNAL EQUIPMENT

## SPECIAL NOTES CONT.

- 2. ALL INTERNAL CABINET WIRING SHALL BE PERFORMED BY THE SHA SIGNAL SHOP. CONTRACTOR SHALL CONTACT ED RODENHIZER 72 HOURS PRIOR TO CONSTRUCTION,
- 3. APS WILL FUNCTION AS FOLLOWS:
- FOR MD 32 (SYKESVILLE ROAD) AT BARTHOLOW ROAD A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS SYKESVILLE at BARTHOLOW, WAIT"
- B. WHEN WALK PHASE BEGINS, THE AUDIBLE SOUND WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- FOR MD 32 (SYKESVILLE ROAD) AT LONDONTOWN BLVD
- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS SYKESVILLE at LONDONTOWN, WAIT"

  B. WHEN WALK PHASE BEGINS, THE AUDIBLE SOUND WILL BE A RAPID TICK, WHICH WILL LAST FOR
- THE DURATION OF THE WALK PHASE,
- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS BARTHOLOW of SYKESVILLE, WAIT" B. WHEN WALK PHASE BEGINS, THE AUDIBLE SOUND WILL BE A RAPID TICK, WHICH WILL LAST FOR
- FOR LONDONTOWN BLVD
  A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE
- PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS LONDONTOWN at SYKESVILLE, WAIT"

  B. WHEN WALK PHASE BEGINS, THE AUDIBLE SOUND WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

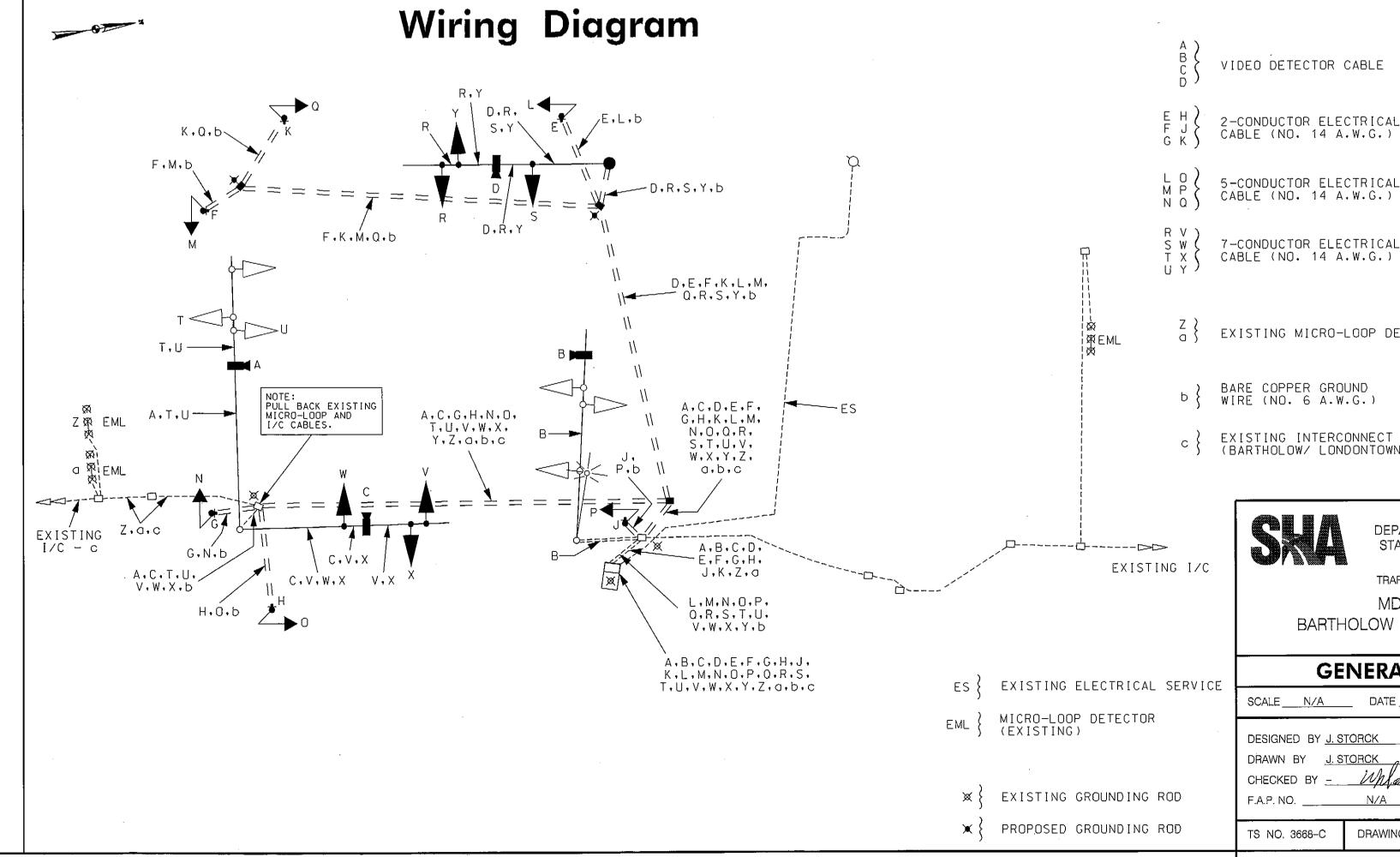
## GENERAL NOTES CONT. FROM SHEET 1

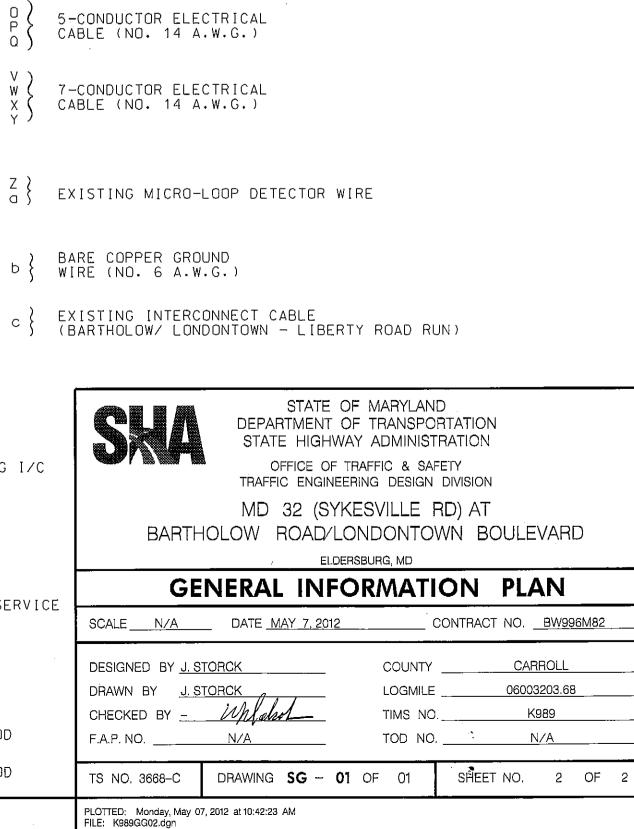
- 5. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD, IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PROJECT ENGINEER IMMEDIATELY,
- 6. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18 IN. FROM A 60 IN. × 60 IN. LEVEL LANDING AREA WITH A CROSS SLOPE OF
- 7. THE 10 FT. SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
- 8. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
- 9. THE LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 & FIG 4E-2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE", IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
- 10. ALL UNUSED CABLE SHALL BE REMOVED.

## Phase Chart

1 2 3 4 5 6 7 8 9 10 11 12 13,14 15,16 17,18 

PHASE 1 AND 5	+G∕R	<b>+</b> G∕R	R	<b>←</b> G/R	<b>+</b> G∕R	R	R	R	R/G→	R	R	R∕G <b>→</b>	DW	DW	DW	
1 AND 5 CHANGE TO 1 AND	6, 2 Al	ND 5,	OR 2	AND	6											\ \d
PHASE 1 AND 6	+G/G	<b>←</b> G/G	G	R	R	R	R	R	R/G→	R	R	R	DW	DW	DW	~\\\
1 CHANGE	<b>+</b> Y/G	<b>4</b> Y/G	G	R	R	R	R	R	R∕Y→	R	R	R	DW	DW	DW	
PHASE 2 AND 5	R	R	R	<b>←</b> G/G	<b>+</b> G∕G	G	R	R	R	R	R	R/G→	DW	DW	DW	
5 CHANGE	R	R	R	<b>←</b> Y/G	<b>+</b> Y/G	G	R	R	R	R	R	R <b>∕</b> Y <b>→</b>	DW	DW	DW	H 44
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	$\vdash$
2 AND 6 CHANGE	Υ	Υ	Υ	Υ	Υ	Υ	R	R	R	R	R	R	DW	DW	DW	]——[
PHASE ALT 2 AND ALT 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	DW	\$
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL⁄DW	DW	
ALT 2 AND ALT 6 CHANGE	Υ	Υ	Υ	Υ	Υ	Υ	R	R	R	R	R	R	DW	DW	DW	0
PHASE 3	R	R	R	R	R	R	G ←G−	G ←G−	G	R	R	R	DW	DW	DW	
3 CHANGE	R	R	R	R	R	R	Υ	Υ	Y	R	R	R	DW	DW	DW	}· ↓ .
PHASE ALT 3	R	R	R	R	R	R	G ←G−	G ←G−	G	R	R	R	DW	DW	WK	Q
PED CLEARANCE	R	R	R	R	R	R	G ←G−	G ←G−	G	R	R	R	DW	DW	FĻ⁄DW	
ALT 3 CHANGE	R	R	R	R	R	R	Υ	Υ	Υ	R	R	R	DW	DW	DW	- - - - - - -
PHASE 4	R	R	R	R	R	R	R	R	R	GG -	ტ ტ	G	DW	DW	DW	7
4 CHANGE	R	R	R	R	R	R	R	R	R	Υ	Υ	Υ	DW	DW	DW	]-!
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL⁄R	FL/R	DARK	DARK	DARK	+ /





PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING

GENERAL